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History

1. The United Chemical Works, National Enterprise, (Spolek pro chemickou a hutni vyrobu) had its main plant in Usti nad Labem and branch plants in Lovosice /N 50-31, E 14-04/, in Retenice near Teplice Lazne /N 50-38, E 13-50/, and the Auer Plant in Prague. The main plant in Usti nad Labem produced mainly sulphuric acid and superphosphates, coal tar dyes and mineral pigments, coal tar dye intermediates, sulphur dyes, bleaching agents, aniline, aniline oil, chlorobenzine, fluorides, ammonium fluoride, chrome dyes, artificial pyrolusite, trichlorethylene, perchlorethylene, chlorine, calcium hypochloride, caustic soda, caustic potash. It also produced bearing metals, blue vitriol, sodium fluoride, potassium permanganate, zinc white, manganese hydroxide, natrium bisulfide, natrium sulfide, Auer gas mantles, waterglass, and hydrogen peroxide. The plant was also engaged in sodium chloride electrolysis in mercury cell and in potassium chloride electrolysis in Billiter Diaphragm cell.

2. The chemical factory in Usti nad Labem was founded c. 1850 by a von KLEMM, together with a number of noblemen, and was named K.K. privat Oesterreichischer Verein fuer Chemische und Metallurgische Produktion. The firm was located in Usti nad Labem but was later moved to Vienna. At that time its main production was caustic soda and sulphuric acid. The factory grew into the largest chemical enterprise of the Austro-Hungarian Empire and later of Czechoslovakia. The main office changed its location from Usti nad Labem to Vienna, then to Karlovy Vary, and later to Prague. The enterprise also built new factories in Usti nad Labem and in other towns and became world-known, having also built several chemical factories in other European cities (Chemical Works Hungaria in Budapest, Chemical Factory Zorka in Zagreb, Morasesti Works in Bucharest), and was part owner of a number of foreign factories until the end of World War II.

From October 1938 until April 1945 the enterprise in Usti nad Labem
25X1A was the property of I.G. Farben and formed, with the Sokolov Chemical Factory [redacted] /N 50-11, E 12-38/, the Chemische Werke Aussig/Falkenau. The main office was in Usti nad Labem, and was headed by a Dr. KUGLER. Another independent enterprise was formed for the production of coal tar dyes, and coal tar dye intermediates. Owned by the I.G. Farben, the plant was named Teerfarbenwerke GmbH, Usti nad Labem. Thus there were two independent factories in Usti nad Labem during World War II; both the property of I.G. Farben. In May 1945 the chemical factories in Usti nad Labem were placed (still as two seperate factories) under the national administration of the United Chemical Works in Prague and in 1946 they again became the full property of that concern.

3. As the result of a reorganization of the chemical industry in Czechoslovakia the United Chemical Works was liquidated on 31 December 1949; it was broken down into several independent national enterprises. The enterprise in Usti nad Labem, except for a short period, bore the name of the former concern, United Chemical Works. After 1 January 1950 the United Chemical Works became directly subordinate to the
25X1A Ministry of Chemical Industry. /For the location of the factory, see the City Plan of Usti nad Labem, [redacted] For the Plant Layout, see Annex A, this report./

Transportation Facilities

4. The factory was connected by spur tracks with the following main railroad lines: Usti nad Labem-Teplice Lazne-Chomutov /N 50-29, E 13-26/ - Cheb /N 50-04, E 12-22/; Prague-Podmokly /N 50-46, E 14-12/; Prague-Decin /N 50-47, E 14-13/; Usti nad Labem-Litormerice /N 50-32, E 14-08/- Ceska Lipa /N 50-41, E 19-33/ - Liberec. The factory had its own railroad station, the Usti nad Labem Chemical Factory. The highway connections were also very good. The Elbe River was an important means of transportation for the factory. However, because the plant was not located on the river itself, all the shipments had to be transferred to railroad cars and forwarded by spur track into the plant area.

Equipment

5. The most important production equipment was installed between 1934 and 1949. The equipment for both electrolysis processes used was installed in 1934. The equipment for coal tar dyes and coal tar dye intermediates production was set up between 1936 and 1938. The production equipment for carbon disulfide dated back to World War II. The furnace for powder roasting of pyrites was installed between 1949 and 1950. It replaced the old furnace which was for floor-to-floor roasting. The entire equipment was very well maintained. The factory had its own machine shops which employed about 120 trained mechanics. The factory had its own boiler plant. Lignite, forwarded to the factory by cable car from the Prokop Holy Mine in Tuchomysl about seven kilometers distant, was used as fuel. This mine was the property of the factory until 1945 when it was nationalized and placed under the jurisdiction of the Czechoslovak Mines. Thereafter, the factory had to buy its coal. Directly beneath the cable factory station there were six generators for gas production. These generators used the lignite from the Prokop Holy Mine. Narrow gauge tracks connected all the production buildings and, in addition, most of the production buildings were connected by a spur track. The electric current was supplied by the hydroelectric plant in Strekov /N 50-39, E 14-04/ and the Heat and Power Plant in Trmice /N 50-39, E 14-00/. Water was pumped from the Elbe River by a pumping station, located close to the old Elbe River Bridge, and by a pipeline; both were the property of the factory. Polluted water was diverted into the Bela River. In 1952 a new water reservoir

was built on a hill also occupied by a cemetery in the vicinity of the factory. Waste products were transported by cable to an area owned by the factory near Chabarovice /N 50-41, E 13-56/ about six kilometers distant.

Production

6. Sulphuric Acid: The new furnace for powder pyrites roasting, installed during 1950, used at full capacity 49,000 tn. yearly. The pyrites were flotated pyrites, in recent years mostly from the Chvaletice 25X1A Mines /N 50-02, E 15-26/ [redacted] The imported pyrites were shipped through Hamburg on the Elbe River to Usti nad Labem from where they were shipped by railroad to the factory. Residues from pyrites roasting were sent to the Kladno and to the Kraluv Dvur /N 49-56, E 14-03/ Iron Works. The residues contained at least 0.35% copper and were sent to the Vitkovice Iron Works. They were sold for 0.70 crowns per kilogram of iron. The factory had also a small furnace, capacity 15 tn. per day, for roasting elementary sulphur. However, the roasting of elementary sulphur was very expensive in comparison with the roasting of pyrites. Further, elementary sulphur was always difficult to obtain mainly because of lack of foreign currency. Before 1950 this small furnace was in operation from time to time to make up for the old furnace which developed defects frequently. I do not believe that this small furnace was in operation in 1953 because the planned imports of elementary sulphur for that year were not half enough to supply this furnace. There was complete equipment for roasting zinc sulphite (blende) in the factory, but it had not been used since 1945 because the Zinc Works in Chuderice, formerly the Weinmann Works, which had furnished the raw materials to the Usti nad Labem factory, was not operating. The Chuderice Zinc 25X1X Works, the property of Czechoslovak Foundries after 1945, stopped operation because it was not profitable. [redacted] the 25X1X equipment of the foundry was disassembled. [redacted] the Usti nad Labem factory processed 50,000 - 60,000 tn. of zinc sulphite with a content of 25-30% sulphur yearly prior to World War II. The major part of the sulphuric acid produced in the Usti nad Labem factory was shipped to the Kladno and Vitkovice foundries, and, for the production of rayon, to the following: Neratovice /N 50-16, E 14-31/, Lovosice, and Theresienthal.

7. Superphosphates: The maximum capacity of the Usti nad Labem factory amounted to 24,000 tn. of raw phosphates yearly; since 1945, however, only 12,000 tn. of phosphate have been processed each year. This quantity conformed to the plan of the Ministry of Agriculture. Raw phosphates processed in the Usti nad Labem factory were half Soviet 25X1A and half French in origin.

8. Carbon Disulfide: Six thousand tons of sulphur were processed in the factory yearly [redacted] This quantity enabled the equipment to run at full capacity. Carbon disulfide was delivered to the rayon factories in Neratovice, in Lovosice, and in Theresienthal. 25X1A Further, it was used as a solvent for oils, resins, rubber, and fats. It was planned to export 700 tn. of carbon disulfide in 1953 to Areas V and VI [redacted] from the Usti nad Labem factory. The remaining areas were covered by the Dynamite Factory in Bratislava.

9. Coal Tar Dyes: The following is a list of various coal tar dyes produced in the factory: dyestuff for dyeing textiles of vegetable origin, direct dyestuff, saturn dyestuff, Indanthrene dyestuff, sulphur dyestuff, ultrazols, medional dyestuff, mediosol dyestuff, mediochrome dyestuff, dyestuff for textiles of animal origin, acid dyestuff, alizarin chrome dyestuff, and chrome dyestuff. These products were used by the textile, leather, paper, and food industries as well as in the production of printing inks.

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10. Coal Tar Dye Intermediates: The main products in this category were aniline oil, aniline salts, chlorobenzene, nitrobenzene, anthraquenone, and alizarin. Aniline oil and aniline salts were used as printing ink on cotton and wool. They were also used in the production of artificial resins and various organic preparations. Nitrobenzene and chlorobenzene were used in the production of coal tar dyes, medicaments, perfumed toilet soap, etc. The raw materials for this production were napthalene, benzene, and toluene, and others which were supplied by the Ostrava Chemical Works.

11. Sodium Chloride Electrolysed in Mercury Cell: Fifty tons of chloride and sixty tons of caustic soda were produced daily. This electrolysis equipment was installed in 1934 and replaced the old "Bell Electrolysis", a patent owned by the United Chemical Works. The Usti nad Labem factory used, at full capacity, in this production, 30,000 tn. of common salt (99% NaCl) a year. All of this salt was obtained from Sojuzpromexport, Moscow, from the East German Stassfurt Salt Mines [redacted] 25X1A. Since the Usti nad Labem factory did not have any large storage facilities for salt, the salt was delivered periodically throughout the year via the Elbe River when navigable, or by railway. The price for one ton, FOB Schoenebeck was 168 crowns, or 626.50 crowns per ton franco RR, Usti nad Labem station. Payment was negotiated through the Czechoslovak-Soviet clearing system. (The plant had to apply annually for permission to import common salt without customs duty; salt in storage in the Usti nad Labem factory was under the control of customs.)

12. Sodium Chloride Products:

a. Sodium hydroxide: Chemically pure, it was subject to further chemical processing. It was also used in the pharmaceutical and cosmetics industries.

b. Sodium hydroxide solid: It was used in the soap, leather, and textile industries as well as for further chemical processing.

c. Sodium hydroxide, liquor: It was shipped for further chemical processing, and to tanneries, and soap and textile plants.

d. Hydrochloric acid: Chemically and technically pure, it was used for the production of metal chlorides, tanneries, sugar factories, production of explosives, galvanization, and in the food industry, and for further chemical processing.

e. Liquid chlorine: It was used for bleaching in the cellulose and textile industries, for the production of plastics, for disinfection and water purification and also sent for further chemical processing.

f. Chloride of lime: It was used as a disinfecting agent and as a bleaching agent in the textile industry.

g. Ammonium chloride: Technically and chemically pure, it was delivered for further processing in the chemical industry, as well as being used by the dye industry, and in the production of medical supplies, and of putty.

h. Aluminum chloride: Appearing in solid, anhydrous, and pulverized form, it was not only delivered for further chemical processing, but also it was used as an ingredient in concrete, for precipitation of glycerin, and as an impregnating agent in the production of textiles.

i. Sodium hypochlorite: Technically pure, it was shipped for further chemical processing, and was also used as a bleaching agent in textile production and as a disinfecting agent.

j. Sodium thiosulfate: In crystalline form, it was used for the dyeing of textiles, in medical supplies, and for the leather and photography industry.

k. Sodium hydrosulfide: It was used in tanneries, and in the textile, paper, sugar and photography industries.

l. Natrium sulfate.

m. Natrium bisulfide.

n. Natrium phosphate.

o. Natrium silicofluoride.

p. Natrium sulphide.

q. Glauber's salt.

r. Fluorides: Both common and with aniline oil, fluorides were used to prevent decay in wood.

s. Ammonium fluoride: It was used mainly in glass production.

t. Sodium fluoride: It was used in glass production and as an impregnating agent and as a preservative in glue.

u. Trichlorethylene: This was used as a solvent for fats, for cleaning textiles and metals and as a solvent for resins, pitch, asphalt, tar, wax, and sulphur.

v. Perchlorethylene: This product was used for removing grease from metals, mainly from aluminum.

w. Sodium chlorate: Pulverized, sodium chlorate was used in the textile industry and in the production of explosives.

x. Sodium benzoate: This was used as a preservative in the food industry.

y. Sodium sulphate: In various compositions, it was used in the dye industry, leather industry, and for the production of pigments and medical supplies, etc.

z. Hexachlorethste: It was used as a preservative.

13. Sulphur Compounds:

a. Aluminum sulfate: Technically and chemically pure, aluminum sulfate was used in the paper, leather, and dye industries, for precipitation of pigments, for glycerin, and for the production of aluminum acetate as well as for water purification.

b. Cupric sulfate (blue vitriol): It was used in agriculture, in the dye and printing industry, in metallurgy and for other types of chemical processing. Production of cupric sulfate depended on the allotment of copper which was imported from abroad by Metalimex.

c. Magnesium sulfate.

d. Barium sulfate: This was used in X rays.

e. Zinc sulfate.

f. Calcium sulfate.

g. Sulphur dioxide: Liquid in form, it was used in the production of sodium sulfate, for bleaching of wool and flax in the textile industry, and for the disinfection and preservation of wine and food.

14. Hydrofluoric acid: Technically and chemically pure, hydrofluoric acid was used for chemical processing, for glass production and electro technique.

15. Waterglass (potassium silicate and sodium silicate): Solid and liquid in form, it was used in all branches of industry and as a preservative. Waterglass was not produced in the main factory area but in Krasne Brezno, a zone of Usti nad Labem. /See City Plan, [redacted] for location of the factory./ The factory for waterglass production was, until 1938, the Ing. J. Dlouhy Firm. It was German property during World War II. In 1945 it was nationalized and incorporated into the United Chemical Works.

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16. Silicates: The silicate department produced various fireproof and acid-proof goods, such as basins, tiles, etc. This department was heavily damaged during World War II and was not reconstructed to its former capacity. Before the war this department supplied all the plants of the United Chemical Works; after the war it supplied the Usti nad Labem factory only.

17. Other Products:

a. Ammonium bicarbonate: Both in crystalline and pulverized form, it was used in the textile, printing, and dyeing industries, in the medical supply, rubber, and food industries.

b. Sodium acetate: This was used in the dye and textile industries.

c. Calcium acetate: Was used for further chemical processing.

d. Calcium phosphate.

e. Calcium nitrate.

18. Potassium Chloride Electrolysed in Billiter Diaphragm Cell: This production used 5,000 tn. of 98% KCl when running at full capacity. KCl was supplied by Soyuzpromex, from East Germany, West Germany, and from France. [redacted] The required quantity of pirolusite was 2,000 tn. and was delivered by the USSR; it was of very good quality. The following are the products of this electrolysis:

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a. Potassium hydroxide: Chemically pure, it was used for other chemical processes, and in the pharmaceutical and cosmetic industries.

b. Potassium hydroxide: Technically pure and solid in form, it was used in the production of soap, and in other chemical processes.

c. Aluminum hydroxide: This was used for impregnation, and in the production of printing inks.

d. Potassium permanganate: It was used as an oxidizing agent, in the pharmaceutical industry, and as dyestuff for wood.

e. Potassium chlorate: This was used in the production of explosives, matches, and coal tar dyes.

f. Potassium alum: Pulverized and in crystalline form, it was used in the dye and medical supply industries.

g. Potassium chrome alum: This was used in the dye and printing industries and tanneries.

h. Black oxide of manganese: From 70-75% MnO_2, it was used as an oxidizing agent. Also, it was used in the glass industry and in electro-technics.

i. Potassium carbonate.

19. Other Products:

a. Ammonia (anhydrous): Ammonia was used in the production of ice, for various purification processes including that of anthracene, and in the production of cyanide, aniline dyes, soaps, and for the extraction of copper.

b. Aqueous ammonia: This type of ammonia was used in the textile industry and for purification purposes.

c. Formic acid: Chemically and technically pure, it was used in the textile industry, in tanneries, for rayon production, for the processing of caoutchouc, in the production of essences and ether, and as a preservative for food.

d. Nitric acid: Chemically and technically pure, it was used in the production of fertilizers, explosives, for the preparation of nitrates, and in laboratory work.

e. Carbon dioxide and liquid carbon dioxide.

f. Coal hydrogenation: (for liquid fuels). A trial production was set up before World War II by the then General Manager Dr. Max MEIER. However, with his departure in 1937, the trial run ceased.

g. Peroxide.

h. Tin chloride process: These facilities were completely destroyed during World War II and were not reestablished.

i. Artificial gems: This production was in preparation as of 1952.

j. Hydrofluoric acid (Fluss-Saeure): This production was in preparation in 1952 and the Fluss-Saeure factory Dohna (Fluorwerk Dohna) in Saxony was used as a model and furnished assistance in the construction of the equipment.

20. In 1953 Chemapol A.S. planned to export the following products of the United Chemical Works: pigments, Auer gas mantles, caustic potash, caustic soda, zinc white, potassium manganese, ammonium carbonate, carbon disulfide, and coal tar dyes.

Laboratories

21. The Usti nad Labem factory had excellently equipped laboratories which were partially incorporated into the Research Institute of the Ministry of the Chemical Industry after 1948.

Employees

22. The factory had about 3,500 employees, 80 of whom were women. The morale of the employees of the Usti nad Labem factory was not good. After World War II a great many unqualified personnel were hired. The Usti nad Labem factory was always behind in its planned production.

23. ZUREK was manager of the Usti nad Labem factory and a CP member, and an employee of long standing of the United Chemical Works. He was about 45 years old. During World War II he was employed in the Neratovice /N 50-16, E 14-31/ Factory and was rewarded by the Germans for his work there. After World War II, he was employed in the Sokolov Factory where he later became manager. From 1951, he was manager of the Usti nad Labem factory.

24. Ing. HOFMANN was technical manager and had long been a technician with the United Chemical Works. Formerly a Social Democratic Party member, he became a zealous CP member after 1948. During World War II, he was employed with the Zilina Factory. He was good in his field.

25. Dr. SEHNOUTKA was an assistant to Ing. HOFMANN; he was third in command at the factory. He was anti-Communistic but was permitted to retain his position because he was an outstanding specialist in his field.

26. Ing. SUCHARDA was the top technician in the production of, among other things, sulphuric acid, superphosphates, carbon disulfide, as well as for both electrolysis processes. He was also in charge of the institution of the Fluss-Saeure production and visited the Fluorwerk Dohna several times. He was also the manager of the Lovosice Factory. As a chemist he was long associated with the United Chemical Works. During World War II he participated in the construction of the Novaky Chemical Works, and later the Neratovice Chemical Factory. He was anti-Communistic. The Communists claimed that if SUCHARDA were not so good in his field, he would have been fired immediately.

27. Ing. SMISEK, a specialist of long standing, was head of the coal tar dye production. Dr. BILL was his assistant. Both of these chemists were CP members but not convinced Communists.

Security

28. The security measures in the Usti nad Labem factory were the usual security measures for all the Czechoslovak chemical works. (The factory had more than 100 apartment houses in various divisions of the town.)

United Chemical Works, Retenice

29. The United Chemical Works in Retenice, near Teplice Lazne, was known as the Dudek Brothers Firm until the end of World War II. This factory produced zinc white. The factory owned the Hugo Lignite Mine in Retenice. After the war the North Bohemian Lignite Mine, National Enterprise in Most, took over the lignite mine and the factory for zinc white was placed under the National Administration of the United Chemical Works in 1946. The factory used 500 tn. of zinc a year which was imported by Metallimex from Poland.

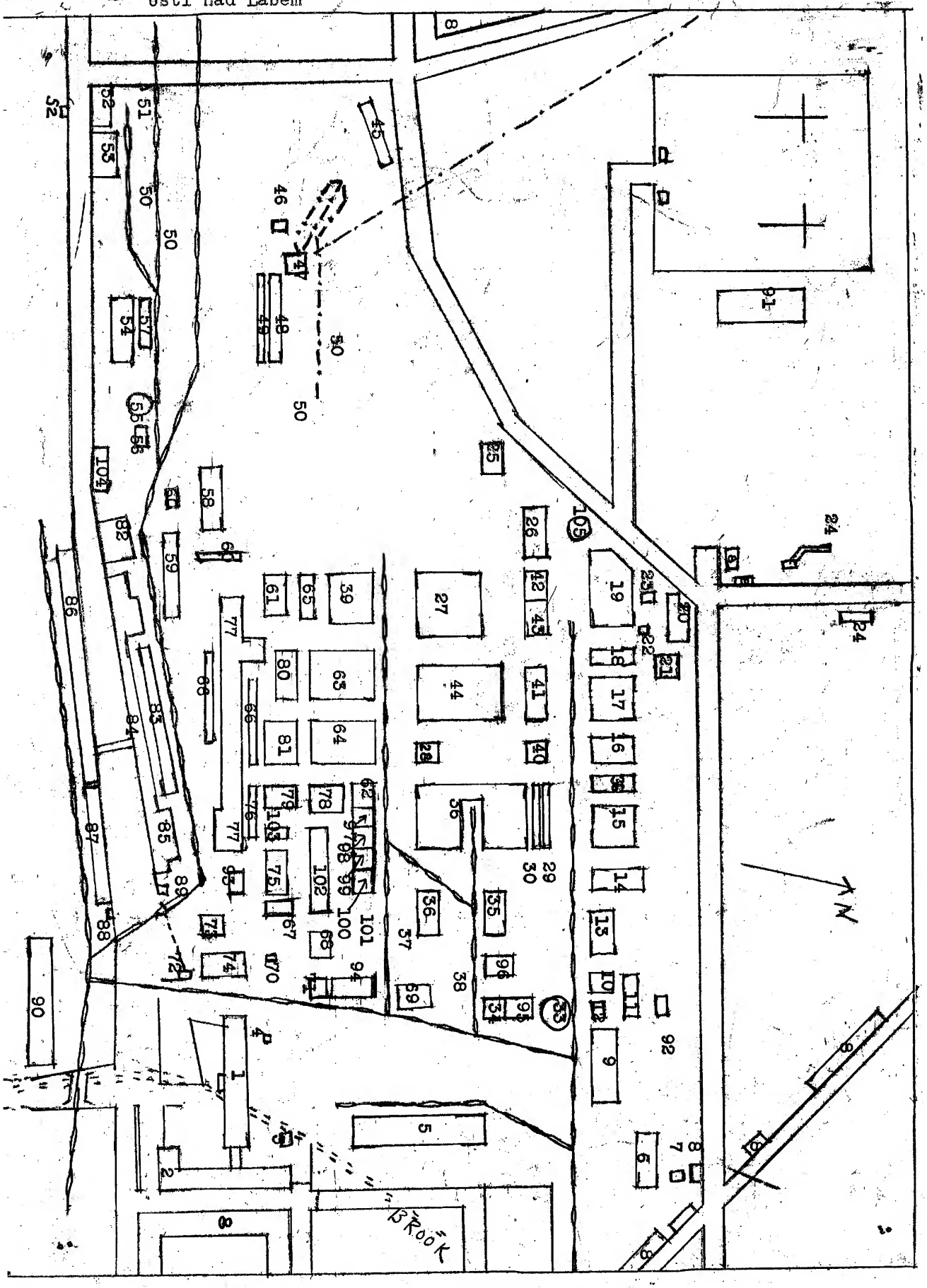
Auer Works, Prague

30. The Auer Works, Prague VII, was a private German firm until the end of World War II. In 1946 it became the property of the United Chemical Works. The main product of this factory was Auer gas mantles, trademarked "Auerlux". A considerable part of the production was exported. Thorium nitrate was the raw material needed for this production. Chemapol met serious difficulties in importing thorium nitrate which came from India; it was impossible through normal channels.

Annex A

Plant Layout of the United Chemical Works, National Enterprise, Usti nad Labem

Annex A. Plant Layout of the United Chemical Works, National Enterprise, Usti nad Labem



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Legend to Annex A

1. New Administration Building
2. Old Administration Building housing laboratories and research facilities
3. Residence
4. Fire Station
5. Cooperage and Lumber Shop
6. Social Hall
7. Gatekeeper's House
8. Eight Factory Apartment Houses
9. Warehouse for Finished Products
10. Anthracene Processing Facilities
11. Aniline Processing Facilities
12. Potassium Permanganate Processing Facilities
13. Pirolusite Processing Facilities
14. Caustic Potash Processing Facilities
15. Sodium Chloride Electrolysis in Mercury Cells Processing Facilities
16. Caustic Soda Processing Facilities
17. Potassium Chloride Electrolysis in Billiter Diaphragm Cell Processing Facilities
18. Warehouse
19. Sulphur Dioxide and Hydrogen Sulphide Processing Facilities
20. Pigment Processing Facilities
21. Coal Hydrogenation Processing Facilities
22. Transformer
23. Pigment Processing Facilities
24. Garage
25. Trichlorethylene and Perchlorethylene Processing Facilities
26. Warehouse for Glass Containers
27. Main Boiler Plant
28. Unknown

29-30. Potassium Salt Storage

31. Not used in Sketch.
32. Not used in Sketch.

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33. Gas Generator 25X1A

34. Formic Acid Processing Facilities

35. Blue Vitriol Processing Facilities

36. Sulphuric Acid and Oleum Processing Facilities

37. Storage for Pyrites

38. Crane for Loading and Unloading Pyrites

39. Liquid Chlorine and Calcium Hypochloride and other NaCl Products Processing Facilities

40. Potassium Chlorate Processing Facilities

41. Chlorates Processing Facilities

42. Anthracquenone Processing Facilities

43. Alizarin Processing Facilities

44. Common Salt Storage

45. Carbon Disulphide Processing Facilities

46. Garage for Electric Freight Cars Within the Plant Area.

47. Control Room for Operation of Cable

48. Coal Storage

49. Generators Using Lignite

50. Coal Storage

51. Gate House

52. Residence

53. Tin Chloride Processing Facilities (not in operation)

54. Old Gas Works (not in operation; razed in 1952)

55. Old Gas Reservoir (not in operation; demolished in 1952)

56. Water Pumping Station

57. Boiler Plant

58. Warehouses for the Silicate Departments

59. Silicate Production Department and Warehouses

60. Silicate Production Department and Warehouses (considerably damaged during World War II)

61. Coal Tar Dyes Processing Facilities

62. Pyrosulphite Processing Facilities

63-64. Coal Tar Dyes and Coal Tar Dye Intermediates Processing Facilities

65. Coal Tar Dye Intermediates Processing Facilities

66. Dyes Processing Facilities

67. Technical Office

68. Barium Sulphate and Barium Chlorate Processing Facilities
69. Titanium White Processing Facilities (not in operation)
70. Scales
71. Fluoric Acid Processing Facilities
72. Main Gate House
73. Mess Hall
74. Tool Shop
75. Boiler Plant
76. Warehouse
77. Warehouse for Finished Coal Tar Dyes
78. Nitric Acid (Technically Pure) Processing Facilities
79. Hydrochloric Acid (Technically Pure) Processing Facilities
80. Nitric Acid (Chemically Pure) Processing Facilities
81. Hydrochloric Acid (Chemically Pure) Processing Facilities
82. Loading Station for Chlorides
83. Ammonia Processing Facilities
84. Superphosphates Processing Facilities
85. Warehouse for Finished Products
86. Superphosphates Storage
87. Warehouse
88. Garage
89. Administration Office
90. Railroad Station (West Station)
91. New Water Reservoir
92. Peroxide Processing Facilities
93. Workshop
94. Storage for Heavy Spar
95. Storage for Fluorspar
96. Old Dye Mixing Shop
97. Anticlor Processing Facilities
98. Natrium Sulfide Processing Facilities

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99. Carbon Dioxide Processing Facilities
100. Liquid Carbon Dioxide Processing Facilities
101. Coal Storage
102. Sulphuric Acid (Old Production Facilities)
103. Glauber's Salt Production Facilities
104. Warehouse for Construction Material
105. Water Tower